

Study of developmental indicators of Three varieties of mandarin Yunesi, Yashar and Clementine on sour orange rootstock under salt stress

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Abstract A greenhouse research was carried out in a completely randomized design with three cultivars of mandarin (Younesi, Clementin and Yashar) and four levels of salinity (control, 1, 3 and 5 dS / m) in three replications with purpose The mechanism of effect of salinity stress on photosynthetic and growth factors of mandarin cultivars was carried out. After applying salinity treatments, fresh and dry weight of shoots, fresh and dry weight of root, number of branches, leaf number, plant height, leaf and root potassium, leaf and root sodium, leaf and root calcium, chlorophyll a, chlorophyll b and total chlorophyll , Proline, nitrogen and leaf protein, ion leakage percent and sugar content were measured. The results showed that salinity stress reduced vegetative and photosynthetic factors in all three cultivars. Cultivar factor on potassium and sodium elements, leaf and root calcium, chlorophyll a, total chlorophyll, proline, ion leakage percentage and sugar content at 1% level, and leaf potassium, leaf nitrogen and leaf protein in five percent had a significant difference It was possible. Also, salinity was significant on root and leaf potassium traits, root and leaf sodium, root and leaf calcium, chlorophyll a, chlorophyll b, total chlorophyll, proline and ion leakage percent at 1% level. The results of interaction between mandarin cultivars and salinity showed significant correlation between root and leaf calcium, chlorophyll a and total, nitrogen and leaf protein and ion leakage percent at 1% level. Also the interaction cultivars of mandarin and salinity significant difference root on and leaf calcium, chlorophyll a and total, leaf nitrogen and protein and electrolyte leakage percent at 1% level. **Keywords:** Orange Base, Salinity, Growth Indicators, Clementine, Yashar, Younesi

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